AMENDMENT

Please amend the pending application in accordance with the following particulars.

<u>In the Claims</u>

The claims are amended as shown on the following pages under the heading LIST OF CURRENT CLAIMS. The list shows the status of all claims presently in the application and is intended to supersede all prior versions of the claims in the application. Any cancellation of claims is made without prejudice or disclaimer.

LIST OF CURRENT CLAIMS

1. (Currently Amended) A 2-dimensional code formation method comprising:

a step of specifying code size for a 2-dimensional code;

a step of specifying storage information to be written in said 2-dimensional code;

a step of calculating ~~setting the~~ cell size for a unit cell of said 2-dimensional code providing storage of said storage information in said 2-dimensional code having said specified code size;

a step of specifying the dot step size or number of dots n x m (where n and m are natural numbers) to be arranged vertically and horizontally inside said unit cell;

a step of creating laser-marking information for forming said 2-dimensional code having said specified code size, based on said code size, said storage information, said cell size and said dot step size or number of dots; and

a step of laser marking said 2-dimensional code having said specified code size, based on said laser-marking information.

2. (Currently Amended) The 2-dimensional code formation method of claim 1 wherein the cell size of said unit cell is changed according to change of said ~~code size and~~ storage information.

3. (Currently Amended) The 2-dimensional code formation method of claim 1, further comprising:

specifying a number of said unit cells; and

wherein the cell size of said unit cell is calculated based on said specified code size and said specified ~~a preset~~ number of said unit cells.

- 3 -

4. (Currently Amended) A 2-dimensional code formation method for, which is a method of forming a 2-dimensional dimenisonal code on a product including a single part or a plurality of parts, and comprising:

a manufacturing-history-information-acquisition step of acquiring manufacturing-history information for a said part;

a 2-dimensional-code-conversion step of converting data that includes an ID number for identifying manufacturing-history information or includes the manufacturing-history information itself for said part into a 2-dimensional code;

a parameter-setting step of setting the size of said converted 2-dimensional code according to said part; and

a data size converting step of converting said 2-dimensional code formed in said 2-dimensional-code-conversion step into data for said 2-dimensional code having said size set in said parameter-setting step; and

a laser-marking step of laser marking said 2-dimensional code having said a set size set in said parameter-setting step directly on said part by a laser marker maker.

5. (Currently Amended) The 2-dimensional code formation method of claim 4 wherein, in said laser-marking step, said 2-dimensional code is formed based on the size of said 2-dimensional code, which was set in said parameter-setting step, by forming: unit cells in which dots that are formed by laser-beam irradiation are arranged vertically and horizontally n x m (where n and m are natural numbers); unit cells in which a rectangular shape is filled in by continuous laser-beam irradiation; or unit cells that are contained within a rectangular shape by continuous laser-beam irradiation.

6. (Original) The 2-dimensional code formation method of claim 4 wherein said laser-marking step includes a process of reading said 2-dimensional code that was laser marked and checking whether or not marking of said 2-dimensional code is correct.

7. (Currently Amended) A 2-dimensional code formation device comprising:

information-acquisition means for acquiring the code size of a 2-dimensional code, storage information that is to be written in said 2-dimensional code, and the step size or number of dots n x m (where n and m are natural numbers) that are arranged vertically and horizontally inside a unit cell of said 2-dimensional code;

calculation means for performing a process of calculating the cell size of said unit cell, based on said code size and said storage information acquired by said information-acquisition means, to provide storage of said storage information in said 2-dimensional code having said acquired code size and a process of creating laser-marking information for forming said 2-dimensional code having said acquired code size, based on said code size, said storage information, said cell size and said step size or number of dots; and

laser-marking means for performing laser marking of said 2-dimensional code having said acquired code size based on said laser-marking information.

8. (Original) The 2-dimensional code formation device of claim 7 wherein said calculation means performs a process of changing the cell size of said unit cell based on change information for said storage information that was acquired by said information-acquisition means.

9. (Currently Amended) The 2-dimensional code formation device of claim 7 wherein said calculation means performs a process of creating different laser-marking

information <u>having different density</u> based on change information for said step size or number of dots that was acquired by said information-acquisition means.

10. (Currently Amended) A 2-dimensional code formation device comprising:

information-acquisition means for acquiring the code size of <u>a</u> 2-dimensional code, storage information that is to be written in said 2-dimensional code, the number of unit cells of said 2-dimensional code, and the dot step size or number of dots n x m (where n and m are natural numbers) arranged vertically and horizontally inside a unit cell of said 2-dimensional code;

calculation means for performing a process of calculating the cell size based on said code size and <u>said</u> number of cells <u>acquired by said information-acquisition means</u>, and a process of creating laser-marking information <u>for forming said 2-dimensional code having said acquired code size,</u> based on said code size, said storage information, said cell size, and said dot step size or number of dots; and

laser-marking means for performing laser marking of <u>said</u> 2-dimensional code <u>having said acquired code size</u> based on said laser-marking information.

11. (Currently Amended) The <u>2-dimensional</u> 2-dimensonal code formation device of claim 10 wherein said calculation means performs a process of changing the said cell size of unit cells based on change information for said number of cells that was acquired by said information-acquisition means.

12. (Currently Amended) The <u>2-dimensional</u> 2-dimensonal code formation device of claim 10 wherein said calculation means performs a process of creating different laser-marking information <u>having different density</u> based on change information for said step size or number of dots that was acquired by said information-acquisition means.

13. (Currently Amended) A 2-dimensional code formation device that forms a̲ 2-dimensional code on a product that is made from a single part or a plurality of parts, and comprising:

means for acquiring manufacturing-history information for s̲a̲i̲d̲ t̶h̶e̶ part/parts of a product;

means for storing the acquired manufacturing-history information;

means for converting data, which includes an ID number identifying said manufacturing-history information, or includes said manufacturing-history information itself, to s̲a̲i̲d̲ 2-dimensional code; and

means for c̲o̲n̲v̲e̲r̲t̲i̲n̲g̲ ̲s̲a̲i̲d̲ ̲2̲-̲d̲i̲m̲e̲n̲s̲i̲o̲n̲a̲l̲ ̲c̲o̲d̲e̲ ̲t̲o̲ ̲d̲a̲t̲a̲ ̲f̲o̲r̲ ̲s̲a̲i̲d̲ ̲2̲-̲d̲i̲m̲e̲n̲s̲i̲o̲n̲a̲l̲ c̲o̲d̲e̲ ̲h̲a̲v̲i̲n̲g̲ ̲a̲ ̲s̲i̲z̲e̲ ̲s̲e̲t̲ ̲a̲c̲c̲o̲r̲d̲i̲n̲g̲ ̲t̲o̲ ̲s̲a̲i̲d̲ ̲p̲a̲r̲t̲/̲p̲a̲r̲t̲s̲ ̲a̲n̲d̲ ̲f̲o̲r̲ performing laser marking of s̲a̲i̲d̲ 2-dimensional code directly on s̲a̲i̲d̲ t̶h̶e̶ part/parts b̶a̶s̶e̶d̶ ̶o̶n̶ ̶t̶h̶e̶ ̶s̶i̶z̶e̶ ̶o̶f̶ ̶2̶-̶ ̶d̶i̶m̶e̶n̶s̶i̶o̶n̶a̶l̶ ̶d̶a̶t̶a̶ ̶t̶h̶a̶t̶ ̶w̶a̶s̶ ̶s̶e̶t̶ ̶f̶o̶r̶ ̶t̶h̶e̶ ̶p̶a̶r̶t̶/̶p̶a̶r̶t̶s̶.